

BLUE

Work Order ID 67238

Monday, March 14, 2011 9:45:26 AM

Page 1

Item ID: D206-667-203BL

Accept

Revision ID:

Item Name: Crosstube Aft, Blue

Start Date: 3/14/2011 Start Qty: 1.00

Required Date: 3/25/2011 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: CZ

Date: 11/03/14 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D206-667-243	C
--------------	---

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile and create labels as per PPP D206-667-203 CHG003

Sullos

110

0.00



BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D206-667-243 using CNC bender program D206-667-203

DP

11-3-23

120

0.00



QC15- Crosstube Dimensional Check

QC

Memo

0.00

Quality Control

Sullos/23

(H)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Approvals:

Process Plan:

Date:

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Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

0.00



Crosstubes

Crosstubes

Memo

0.00

Crosstubes

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 and drill table DT8577 and tower holes #6 as per QSI0010 and as per Dwg D206-667-243. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243 Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D206-667-243. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D206-667-243

6-Drill Fwd rivet holes using drill Jig DT8789FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D206-667-243.

8-C'sink holes as per Dwg D206-667-243.

9 -Scribe part # and batch # using vibrating stylus as per Dwg D206-667-243 Inside of Cuff(Donot engrave on outside of tube)

10 -Deburr & Inspect for surface damage. Repair damage within limits as per

DT 11-0325
SAD

0

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Dwg
D206-667-243

140

Crosstubes Chemical Conversion

0.00

SAD 11-03-28



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

SAD 11-03-29

FD

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Outsource process - NDT per QSI038 4.1	0.00							
	Outsource2	0.00							
	Outsource process - NDT								
	Memo								
	Liquid Penetrant Inspection as per QSI 038Or								
	Issue P/O: 13734								
	LPI as per ASTM 1417								
	Level 2 Attach copy of NDT results to work order								
180	Packaging	0.00							
	Packaging	0.00							
	Packaging								
	Memo								
	Ensure copy of NDT results attached to work order.								
190	QC5- Inspect part completeness to step on W/O	0.00							
	QC	0.00							
	Quality Control								
	Ensure results are as per Dwg D206-667-243								

CL 11/03/29 ①

L 4/13/29 ①

AT 11-93-29

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
205 SprayPaint Spray Painting	Spray Painting per QSI005 4.2 Memo Spray Painting: prime grey B: 115967 spray paint delfleet blue B: 115985 clear delfleet B: 117113	0.00 0.00					11	04	05 ①
210 QC Quality Control	QC14- Inspect Spray Paint Memo Wrap in plastic bag to protect from scratches	0.00 0.00					11	04	05
220 Crosstubes Crosstubes	Crosstubes Memo 1-Install nut plates as per Dwg D206-667-243.	0.00 0.00					11	04	05 ①

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Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230 Crosstubes	Skidtubes	0.00				<i>ml</i>	<i>11</i>	<i>04</i>	<i>05</i> (7)
Crosstubes	Memo 1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note: (3) top holes should be facing up. A/R Magnobond 6398; <i>116677 exp: 08/2011</i>	0.00							
	2-Install supports and clamps as per Dwg D206-667-243. <u>Torque clamps to 80-100 in lb</u> <i>ml 11.04.06</i> (1)								
240 QC	QC5- Inspect part completeness to step on W/O	0.00							(4)
Quality Control	Memo	0.00							

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Customer:

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250 Packaging Packaging	Pick Kit Memo	0.00 0.00						11/4/85	
260 QC Quality Control	QC4- 100% Inspect kits for completeness Memo	0.00 0.00							
270 Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPP D206-667-203 Location: _____ PPP Rev: _____	0.00 0.00							

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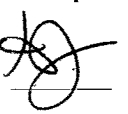
Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							

11/4/11 MF
11-04-11

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Picklist Print

Page 1

Monday, March 14, 2011 9:45:22 AM

Work Order ID: 67238

Parent Item: D206-667-203BL

Parent Item Name: Crosstube Aft, Blue


Start Date: 3/14/2011

Required Date: 3/25/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 10.10.29 now at chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D206-667-203TRN 		Manufactured	No			220	Each	6.0000	1	1			
Crosstube Turning Detail													

Location	Loc Qty	Loc Code
LG003	6	
65134	1	
66431	1	
66432	1	
67060	1	
67061	1	
67062	1	

D2873-043



Nut Plate Assembly

Manufactured No

220 Each 38.0000 2 2



Location	Loc Qty	Loc Code
LG	36	
65375	16	
66898	20	
ST	2	
60981	2	

D2873-045



Nut Plate Assembly

Manufactured No

220 Each 36.0000 2 2



Location	Loc Qty	Loc Code
LG	36	
60982	4	
63498	1	
65132	11	
65992	20	

① 11-3-23

11.04.05

11.04.05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item Name: Crosstube Aft, Blue

Start Date: 3/14/2011

Required Date: 3/25/2011

Start Qty: 1.00

Required Qty: 1.00

D2892-1

Manufactured No

230

Each

36.0000

2

2



Support



ml 11 04 05

Location

Loc Qty

Loc Code

LG

36

41986

2

42785

18

62592

10

65717

6

D3595-063-450

Manufactured No

230

Each

73.4590

4

4



RUBBER CUSHION



ml 11 04 05

Location

Loc Qty

Loc Code

LG

68.45897368

53775

5.97897368

58161

3.56

59580

0.12

61465

4.68

63960

10

65656

2.12

67067

42

ST415

67353 X3

5

64171

4

64300

1

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item Name: Crosstube Aft, Blue

Start Date: 3/14/2011

Required Date: 3/25/2011

Start Qty: 1.00

Required Qty: 1.00

MS20601-AD4W10 Purchased

No

230

Each

122.0000

14

14



RIVET



M 11.04.05

Location

Loc Qty

Loc Code

LG051

122

114245

2

115405

2

115881

16

116186

2

116767

100

MS21920-22

Purchased

No

230

Each

48.0000

4

4



Clamp(per MIL-DTL-8783C)



M 11.04.05

Location

Loc Qty

Loc Code

LG050

48

114077

2

116207

46

AN5-10A

Purchased

No

250

Each

210.0000

10

10



Bolt



11/4/33

Location

Loc Qty

Loc Code

ST337

210

115589

50

115700

10

116704

50

116924

50

117010

50

10

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Start Date: 3/14/2011

Required Date: 3/25/2011

Start Qty: 1.00

Required Qty: 1.00

AN5-32A Purchased No 250 Each 131.0000 4 4 11/4/859
Bolt

Location	Loc Qty	Loc Code
ST340	131	
115016	21	
115108	50	
115589	60	

AN5-34A Purchased No 250 Each 80.0000 4 4 11/4/859
Bolt

Location	Loc Qty	Loc Code
ST340	80	
115835	20	
116003	20	
116704	20	
117010	20	

AN960JD516 NAS1149D0563J Purchased No 250 Each 34.0000 18 18 11/6702 11/4/859
Washer

Location	Loc Qty	Loc Code
ST298	34	
103694	18	
107534	12	
109287	4	

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Start Qty: 1.00

Required Qty: 1.00

MS21042L5

Purchased

No

250

Each

966.0000

4

4



Nut

11/1/88

Location

Loc Qty

Loc Code

ST300

966

114813

26

115594

244

116105

496

116548

200

✓

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

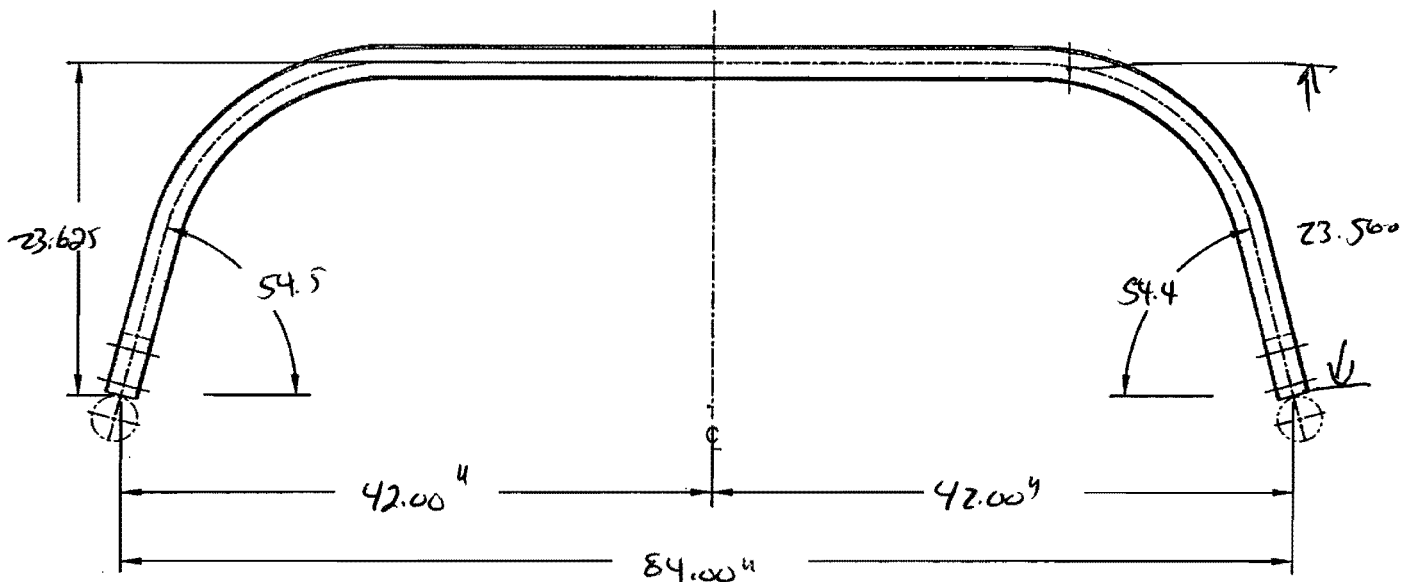
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DART AEROSPACE LTD		Work Order: 67238	
Description: Crosstube High Aft (206L)		Part Number: D206-667-203	
Inspection Dwg: D206-667-243 Rev: C			Page 1 of 1

Required Dimension	Min	Max
Height	23.39	23.65
1/2 Span	41.79	42.05
Angle	54	56
Total Span	83.58	84.1



Comments

QC15 Inspection	8
Date	11/12/23

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	09.11.17	Dwg Rev updated	KJ	
C	09.12.14	Dimensions update per Dwg Rev C	KJ	

Item	Qty -243	Part Number	Description
1	X	D206-667-243	CROSSTUBE ASSEMBLY (206L HIGH AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W 10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

CL 11/03/14
L210: 67238

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6004-115
FINISHED LENGTH = 104.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-243" AND BATCH NUMBER ON
INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 21.9 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY,
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 8 PASSES. MAXIMUM TUBE FLATTENING DUE
TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER
QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE
D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE
LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN.-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RELEASED
08/11/2006

C	REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-450 WAS D2856-400-773 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCES (ZN 4-3, CS-3, D3-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES	PH	05.07.26
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN	9P	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. C
CHECKED	9P	D206-667-243	SHEET 1 OF 4
MFG. APPR.	9P	TITLE	SCALE
APPROVED	9P	CROSSTUBE ASSY (206L HIGH AFT)	NTS
DE APPR.	9P	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS RELEASED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	08.11.06		

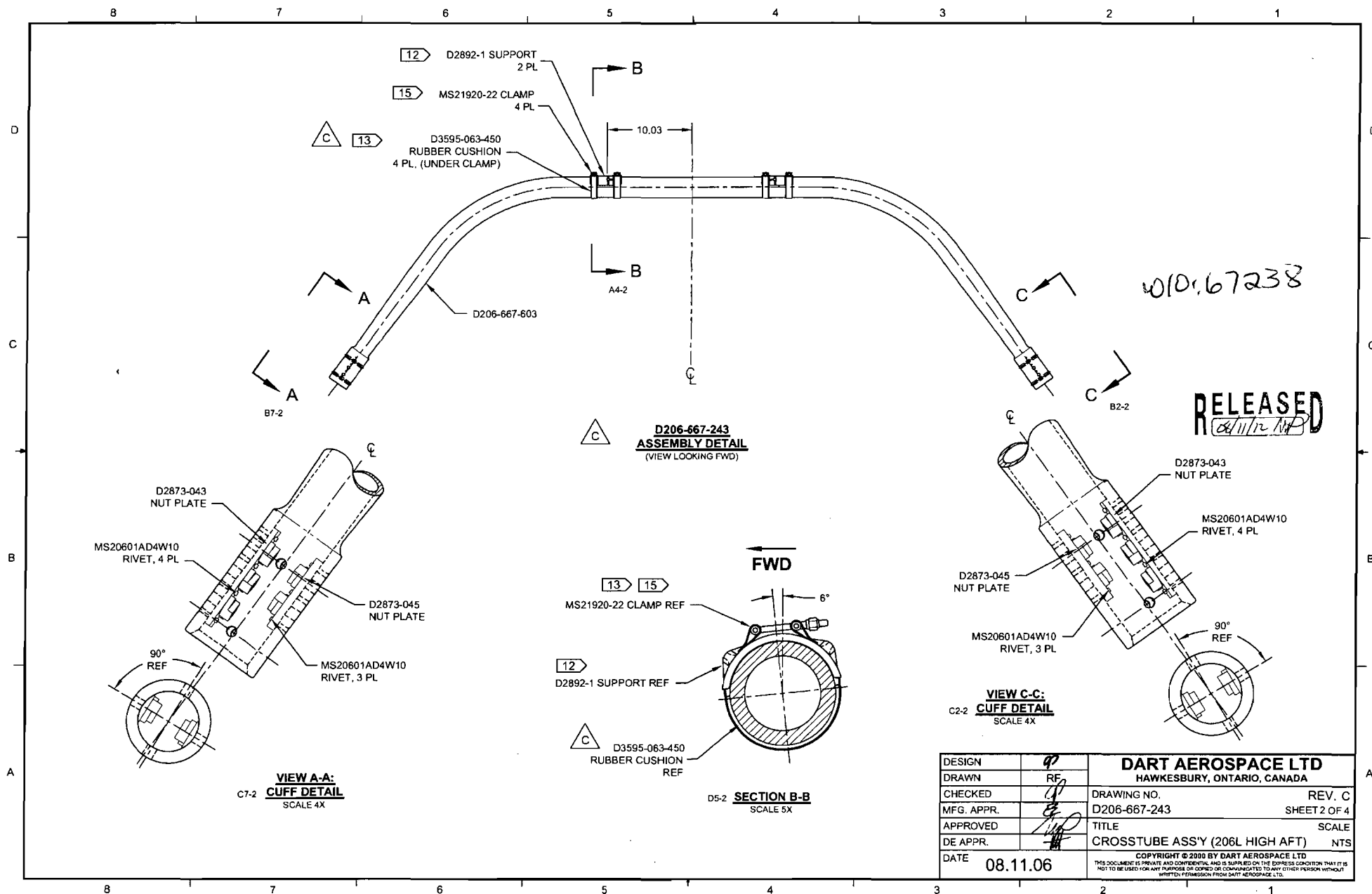
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W10,67238

RELEASED
 8/11/12

DESIGN	90	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. C
MFG. APPR.	RF	D206-667-243	SHEET 2 OF 4
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DATE	08.11.06	COPYRIGHT © 2000 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

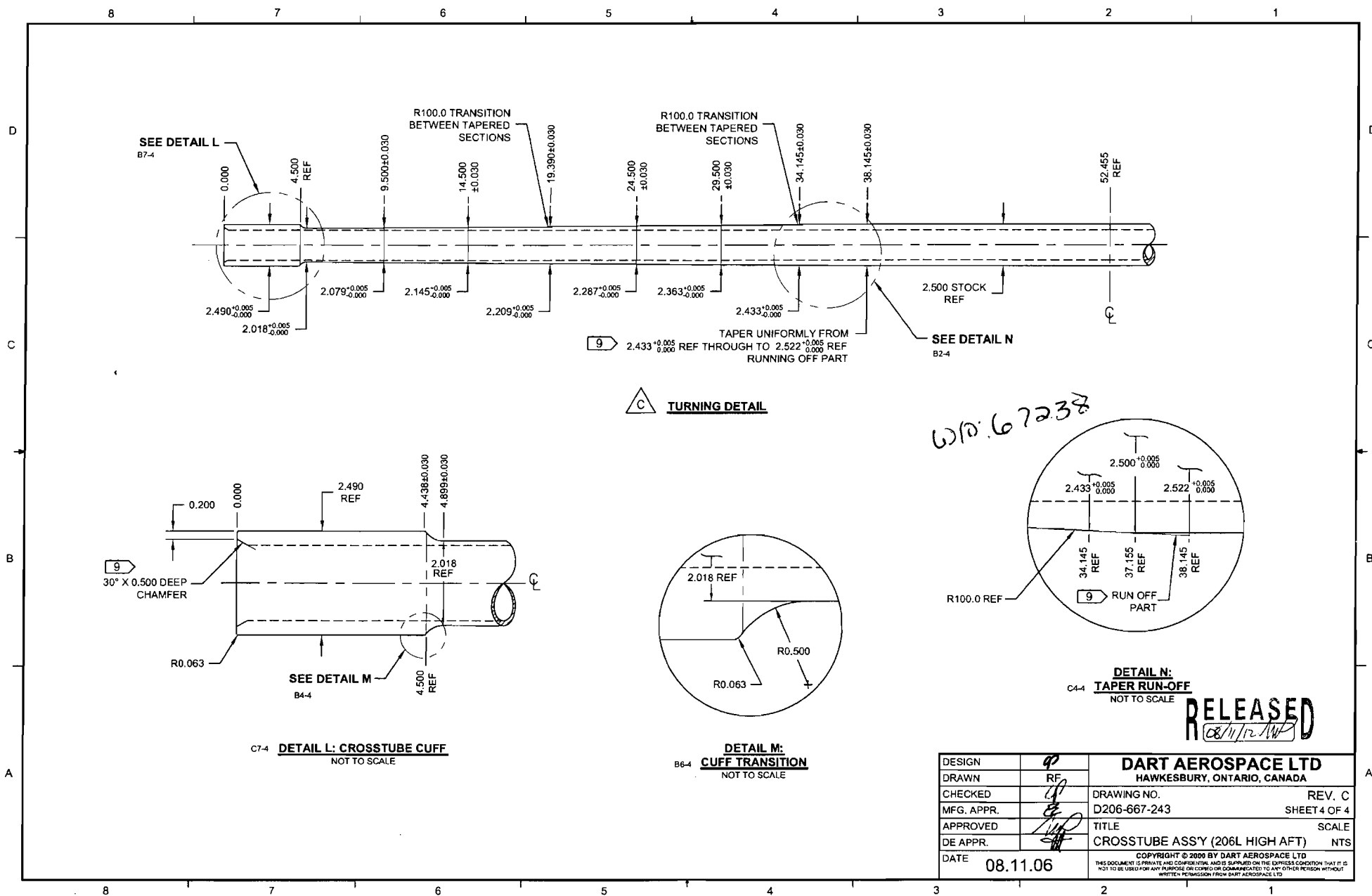
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	90	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	CP	DRAWING NO.	REV. C
MFG. APPR.	EP	D206-667-243	SHEET 4 OF 4
APPROVED	44P	TITLE	SCALE
DE APPR.		CROSSTUBE ASS'Y (206L HIGH AFT)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO13734**

Purchase Order Date 3/29/2011

PO Print Date 3/29/2011

Page Number 1 of 2

Order From :

VC-ACU002

ACUREN
2190 SPEERS ROAD
OAKVILLE, ON L6L 2X8
CA

Contact Name

Vendor Phone 613 931 1261

Vendor Fax 613 931 2777

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

10127-2607

Tax Resale Nbr

Net 30

Terms

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

PAID
6/11/13

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	62181	D3691-1 STUD	3/29/2011 Yes	11.00	Yours ppd	\$7.7272	\$85.00
		Special Inst:	LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2				
2	67351	D212-664-101 CROSSTUBE	3/29/2011 Yes	1.00	Yours ppd	\$85.0000	\$85.00
		Special Inst:	AS ABOVE				
3	67352	D212-664-101 CROSSTUBE	3/29/2011 Yes	1.00	Yours ppd	\$85.0000	\$85.00
		Special Inst:	AS ABOVE				

Change Nbr: 1

Change Date: 3/29/2011

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable



LIQUID PENETRANT TEST REPORT

P- 12233

PAGE 1 OF 2

CLIENT DART Aerospace DATE March 29-2011 TIME AM ☒ PM ☐
ATTENTION LINDA LACELLE ACUREN JOB NO. 188-11-02066
ADDRESS 1270 ABELDEEN ST. POWO NO. 13734
HAWKESBURY, ON WORK LOCATION HAWKESBURY
K6A 1K7 ACCEPTANCE STD. ASTM 1417/MS-038 REV./DATE 2005
PROJECT F.P.I. ON CROSS TUBES
ITEM(S) EXAMINED (7)

JOB DESCRIPTION PROCEDURE NO. LT-002 REV./DATE 2008 TECHNIQUE NO. LT-002 REV./DATE 2008
PART NO. — MATERIAL ALUMINE ALUMINUM THICKNESS VARIOUS
SCOPE WET FLOURESCENT LIQUID PENETRANT INSPECTION.
CARRIED OUT ON 100% EXTERNAL SURFACE.

TEST DETAILS
METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N 16459 ☒ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
PENETRANT 2467 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER LASINO
DEVELOPER SK052 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N 1098866 CAL DUE DATE oct-19
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY 2011

TEST SURFACE
SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☒ MACHINED ☐ SHOT BLASTED ☒ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/20°F ☐ -4°C/20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

ITEM	DESCRIPTION	STATUS	REMARKS
1	CrossTUBE:W.O. 67235	✓	INDICATIONS TO BE REMOVED
1	CrossTUBE:W.O. 67351	✓	
1	CrossTUBE:W.O. 67352	✓	
1	CrossTUBE:W.O. 67238	✓	
1	CrossTUBE:W.O. 67237	✓	
1	CrossTUBE:W.O. 67236	✓	INDICATIONS TO BE REMOVED
1	CrossTUBE:W.O. 67433	✓	INDICATIONS TO BE REMOVED

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES
CLIENT REPRESENTATIVE Ken Titley DTR # E-63781
TECHNICIAN (SIGNATURE): [Signature] REPORT REVIEWED BY:
NAME (PRINT): Mike Johnson NAME INITIALS
CGSB LEVEL 2 SNT LEVEL — CGSB LEVEL — SNT LEVEL —
CGSB REG. NO. 6606 CGSB REG. NO. —

